

polypeptide and a cysteine residue in the second polypeptide, and said cysteine residues [being] are functionally homologous to Cys 67 of the HLA-B27 heavy chain.

3. (Amended) [A] The dimer [according to] of claim 1, wherein said [in which the] first and/or second polypeptide comprises residues 1 to 275 of the HLA-B27 heavy chain.

4. (Amended) [A] The dimer [according to any one of the preceding claims] of claim 1, wherein said [in which the] first polypeptide and/or the second polypeptide comprises at least the first two N-terminal domains of the HLA-B27 heavy chain.

5. (Amended) [A] The dimer [according to] of claim 1, wherein said [in which both] first and second polypeptides comprise residues 1 to 275 of HLA-B27 heavy chain cross-linked by a disulphide bond between Cys 67 of each polypeptide.

6. (Amended) [A] The dimer [according to any one of the preceding claims] of claim 1, wherein said [in which the] first polypeptide and/or the second polypeptide is linked to biotin.

7. (Amended) [A] The dimer [complex comprising biotinylated dimers as defined in] of claim 6, wherein said dimer is bound to fluorescently-labelled streptavidin in a molar ratio of 4:1 to form a complex.

8. (Amended) A method of making [a] the dimer of claim 1 comprising the step of [as defined in any one of the preceding claims which comprises of] providing a first polypeptide and a second polypeptide [as defined in any one of the preceding claims] in conditions in which they cross-link.

9. (Amended) A method of detecting in a sample the presence of a receptor [which binds to a dimer or complex as defined in any one of claims 1 to 7 or made by a method as defined in claim 8 which comprises] comprising the steps of contacting the sample with the dimer of claim 1 and measuring the binding of the substance with said dimer.

10. (Amended) The [A] method [according to] of claim 9, wherein said sample comprises cells from blood or synovial fluid [and binding of cells to a complex according to claim 7 is detected by a flow cytometer].

11. (Amended) A method of determining the onset of, or predisposition to a spondyloarthropathy, comprising measuring the level of [, or detecting the presence of] a receptor in [the] a human or animal body which binds to [a] the dimer of claim 1 [or complex as defined in any one of claims 1 to 7 or made by a method as defined in claim 8].

12. (Amended) A monoclonal antibody comprising an epitope that binds the dimer of claim 1, wherein said antibody [which binds a dimer as defined in any one of claims 1 to 6, but] does not bind to native HLA-B27.

13. (Amended) A method of determining in a sample the presence of a substance which inhibits the binding of [a] the dimer [or complex, as defined in any one] of claim[s] 1 [to 7 or made by a method as defined in claim 8 with an antibody as defined in claim 12] comprising:

contacting said sample with said dimer or complex in the presence of [said] an antibody; and

determining whether binding of said antibody to said dimer or complex is inhibited.

14. (Amended) A method of determining in a sample the presence of a substance which inhibits the binding of [a] the dimer [or complex as defined in any one] of claim[s] 1 [to 7 or made by a method as defined in claim 8 with a receptor as defined in claim 11] comprising:

contacting said sample with said dimer or complex in the presence of [said] a receptor, and

determining whether binding of said receptor to said dimer or complex is inhibited.

15. (Amended) [A dimer or complex as defined in any one of claims 1 to 7 or made by a method as defined in claim 8, a monoclonal antibody as defined in claim 12 or a substance determined by a method of claim 13 or 14 for use in] A method of treating a subject suffering from spondyloarthropathy [or for use as a prophylactic to prevent the onset of a spondylarthropathy] comprising administering to a subject a composition, wherein said composition comprises the dimer of claim 1.

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16. (Amended) The [A] method of claim 11, wherein said dimer is [determining the onset of or predisposition to a spondylarthropathy [which comprises measuring the level of or detecting the presence of the] native homodimer of the heavy chains of HLA-B27 [ in the human or animal body or in a sample from the human or animal body].

17. (Amended) The [A] method [according to] of claim 16, wherein said [in which the] homodimer is measured [or detected] by measuring its binding to an antibody, wherein said antibody does not bind to native HLA-B27 [as defined in claim 12].

18. (Amended) An ex-vivo cell comprising the dimer of claim 1 under conditions wherein said dimer is expressed [which expresses a dimer as defined in any one of claims 1 to 6].

19. (Amended) [A] The cell [according to] of claim 18, wherein said cell [which] does not express  $\beta_2$ -microglobulin.

20. (Amended) A composition for tolerising a human or animal to the native homodimer of the heavy chains of HLA-B27 [which] comprising [a] the dimer [or complex as defined in any one] of claim[s] 1 [to 7 or made by a method as defined in claim 8], or a tolerising fragment thereof, [or a cell according to claim 18 or 19;] in association with pharmaceutically acceptable carrier or diluent.

21. (Amended) A polynucleotide which encodes the dimer of [a first polypeptide or a second polypeptide as defined in] claim 6.

22. (Amended) A transgenic non-human animal [which has been] engineered to express [a] the dimer [according to any one of] claim[s] 1 [to 6], wherein said dimer is not a homodimer of the native HLA-B27 heavy chain.

23. (Amended) A substantially isolated T cell capable of binding the dimer of claim 1. [a dimer according to any one of claims 1 to 6 or a complex according to claim 7 or a receptor derived therefrom which retains said binding capability.]

24. (Amended) A method of tolerising a human or animal to the native homodimer of the heavy chains of HLA-B27 comprising administering to the human or animal [a] the composition [as defined in] of claim 20.

**Please add the following new claims:**

25. A method of treating a subject suffering from spondylarthropathy comprising administering to a subject a composition, wherein said composition comprises the dimer of claim 7.

26. A method of treating a subject suffering from spondylarthropathy comprising administering to a subject a composition, wherein said composition comprises the antibody of claim 12.

27. A substantially isolated T cell capable of binding the dimer of claim 7.

28. A composition for tolerising a human or animal to the native homodimer of the heavy chains of HLA-B27 comprising or the cell of claim 18 in association with pharmaceutically acceptable carrier or diluent.

29. A method of tolerising a human or animal to the native homodimer of the heavy chains of HLA-B27 comprising administering to the human or animal the composition of claim 28.

30. The dimer of claim 2, wherein said first and/or second polypeptide comprises residues 1 to 275 of the HLA-B27 heavy chain.